

20. The method of claim 15, wherein the silicon carbide barrier layer is deposited using an RF power supply supplying a power density of about 8.6 to about 14.3 watts per square inch to an anode and cathode in the chamber.

21. The method of claim 15, wherein the silicon carbide barrier layer is deposited with a methylsilane flow rate of between about 100 to about 500 sccm, a helium or argon gas flow rate of between about 1000 to about 2000 sccm, a chamber pressure of about 6 to about 8 Torr, an RF power source supplying a power density of about 8.6 to about 14.3 watts per square inch to an anode and cathode in the chamber, a substrate surface temperature of between about 200°C to about 400°C, and a showerhead to substrate surface spacing of between about 300 to about 600 mils.

22. The method of claim 15, wherein the alkylsilane is derived from a common methylsilane selected from the group of methylsilane, dimethylsilane, trimethylsilane, and combinations thereof.

REMARKS

This preliminary amendment is intended as a full and complete response to the Final Office Action dated September 5, 2002, having a shortened statutory period for response set to expire on December 5, 2002. Claims 15-22 are pending in the application after entry of the amendments from a Response to the Final Office Action dated November 5, 2002, as stated by the Examiner in an Advisory Action dated December 3, 2002. Claims 15-22 stand rejected in an Advisory Action dated December 3, 2002. Applicants believe that no new matter has been introduced in this response.

Claims 15-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Endo et al.* '150 and Europe '440 as applied to claims 1-8, 10-13, and 28, and further in view of Applicant's admitted prior art and either one of *Zhao* and *Somekh*. The Examiner asserts that it would have been within the scope of one or ordinary skill in the art to combine the teachings of *Endo et al.* '150, Applicants admitted

prior art, and Europe '440 with either *Somekh* or *Zhao* to enable the formation of the structure of Figure 1. Applicants respectfully traverse this rejection.

Somekh and the present application are commonly owned and *Somekh* is available as a reference only under the provisions of §102(e). However, *Somekh* and the present invention are commonly owned by Applied Materials, Inc., and thus, *Somekh* is not prior art under the new §103(a) rule, which is applied to this Continued Prosecution Application (CPA).

Applicants further submit that *Zhao* is not prior art based on the accompanying Rule 131 Affidavit that establishes the date of invention by the Applicants prior to the filing date of *Zhao*, thus, removing *Zhao* as a reference.

Since all rejections of claims 15-22 include *Somekh* or *Zhao*, which are not prior art, withdrawal of the rejection of claims 15-22 is respectfully requested.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this office action. Accordingly, allowance of the claims is respectfully requested.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed aspects of the invention. Having addressed all issues set out in the office action, applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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